

**SEISMIC SIGNALING APPARATUS AND METHOD FOR
ENHANCING SIGNAL REPEATABILITY**

ABSTRACT OF THE DISCLOSURE

A seismic signaling apparatus (100) and method for enhancing the repeatability of the generated seismic signals are disclosed. The seismic signaling apparatus (100) includes a support frame (102) having an air-gun array (114) operably mounted thereto. The air-gun array (114) includes a plurality of air-guns (118, 120, 122) that are positioned such that a tapered, heavy centered, point source seismic signal is generated upon firing of the air-gun array (114). Shock absorbing members (124) are attached to adjacent air-guns (118, 120, 122) in order to absorb the force generated by the firing of the air-gun array (114). In particular, the shock absorbing members (124) absorb the forces associated with air-gun recoil to minimize the movement of the air-guns (118, 120, 122) relative to each other and the support frame (102), thereby stabilizing the air-gun array (114) and enhancing the repeatability of the generated seismic signals.